

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Crawford	Attorney Docket:	0975-003
Serial No:	09/825,107	Examiner:	Jorgensen, Leland, R.
Confirmation:	3240		
Filed:	April 3, 2001	Art Unit:	2675
TITLE:	THUMB ACTUATED X-Y INPUT DEVICE		

INTERVIEW SUMMARY

Mail Stop AF
Commissioner for Patents
P O Box 1450
Alexandria VA 22313-1450

Pursuant to 37 CFR 1.333 regarding Interviews, Applicant's attorney submits the following summary of the October 23, 2003 interview regarding the above-identified application.

The Applicant Peter Crawford met Examiner Leland Jorgensen and Supervisory Patent Examiner Steven Saras. Applicant's attorney, Kevin Flynn, joined the discussion by telephone.

The conference started with a demonstration by Pete Crawford of a prototype of his device. The prototype was connected to a computer. The prototype used did not employ light beam based zero force touched switches but instead used capacitive plates. The prototype used a touch screen configuration such as shown in Figures 12 and 13.

An extended discussion of the movements of the thumb while operating the device as opposed to kicking movements or other undesirable movements included comments by Examiner Saras on the difficulties in using degree of thumb movement as a basis for giving clear indication to others as to the line between infringing and non-infringing.

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Peter Crawford used a joy-stick of the type used as an input devices for computer games (especially flight simulation games) to help illustrate the difference in thumb and arm position in using the present invention as opposed to a device such as that in principle reference Leiper--US Pat. No. 6,184,862. It was agreed that claim language such as found in pending claim 3 and proposed claim 30 ("substantially perpendicular" or "substantially perpendicularly upward") distinguished the invention over Leiper and the art of record. Hamling--US 5,648,798 was another major reference during prosecution but was not discussed for any extended period. The discussion of allowability did not rely upon or reference other features in the claims such as "seated user" as found in the preamble of claim 3, the use of channels for placement of the user's fingers, or the "fin". Note that the fin was discussed including a brief discussion of whether the word "fin" should be replaced with another term since the prototype has the fin integrated into the body of the apparatus rather than as an attached component. Ultimately, this line of discussion ended without a requirement to replace "fin" with another term.

There was not much of a discussion of claim 1 as Applicant had tentatively decided to cancel claims 1 and 2 in order to expedite prosecution.

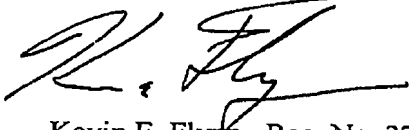
Claim 20 as amended in the March 13, 2003 response was discussed briefly including the concept of an amendment to limit the input to "mouse inputs". However, this discussion ended when Examiner Saras noted that such a claim would require a new search and he did not feel that was appropriate at this stage of the prosecution. Applicant will need to consider whether a continuation is appropriate to seek such a claim. I believe Michalski--US Patent No. 4,497,982 was referenced during this discussion by those physically present in the meeting.

A discussion followed regarding claims 18 and 19 which depend from 17. Applicant Crawford clarified that the scrolling was achieved by switching the operational mode of the "mouse buttons" through an input by the thumb to the scroll-mode select switch. The discussion centered on claim 18. It was decided that the concept appeared patentable over the art of record and Applicant was invited to revise the scroll-mode select claims into independent form.

Examiner Saras stressed that the claims would undergo further consideration and would not be allowed if they were not patentable over all the art of record and any new art located in a subsequent search.

Dated: November 3, 2003

Respectfully submitted,



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Enclosures

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DRAFT – OCTOBER 2003 CLAIMS (Excerpts)

30. (new) An input device for receiving an x-y input from a user's thumb, comprising:

a housing having an upper surface shaped for supporting a user's thumb thereon in a position substantially coextensive with a user's forearm corresponding to the user's thumb ;

a fin extending upward from said housing along a direction substantially parallel to the forearm of a user holding the input device in a manner for being used, said fin located for supporting a user's thumb at the region at which it connects to the hand;

at least one input actuator for receiving x-y input, the input actuator extending substantially perpendicularly upward from said housing at a location allowing a user's thumb to contact and to move in contact along the input actuator's surface without undesirable flexural motion of the thumb at the thumb's interphalangeal joint; and

said housing having at least one other surface located substantially opposite to said upper surface for allowing at least a portion of at least one user's finger from the same hand as the thumb to be in contact therewith for allowing a user to operatively hold and support the device.

